Developing Country Studies
ISSN 2224-607X (Paper) ISSN 2225-0565 (Online)
Vol.3, No.9, 2013
www.iiste.org

Attitudes toward Service Innovations in Red Meat Industry and its Consumption Effects on Nigerian Consumers

Dr. Oluwole Iyiola* Barrister Edith Ebe Oni-Ojo
Department of Business Management, Covenant University, Ota, Nigeria.
* dele.iyiola@covenantuniversity.edu.ng; ebe.oni-ojo@covenantuniversity.edu.ng

Abstract
This paper focused on the Nigerian beef market, where meat safety is one of the most important issues of product quality for retailers, consumers, and the legal protection afforded consumers of the product. In today's challenging economic climate, every business needs an organization-wide commitment to a comprehensive marketing strategy so it will stand out among the growing number of competitors competing for consumers. One of the ways of doing this is by providing quality products/services. The meat industry in Nigeria has failed to do this, thus this research was carried out to see how innovation can bring quality into this industry and some of the laws relating to consumer protection in Nigeria.
The total population in Nigeria was last recorded at 170,123,740 (million) people in July 2012 (Indexmundi.com). According to Osho and Asghar (2005) the national population figure by the Nigeria Census Board is 170 million; this not only make Nigeria one of the largest meat consumers in this region of the world, but also one of the largest meat producing countries in Africa. Nevertheless, the deplorable conditions of meat products from the abattoirs to consumers are issues that could not just be swept under the rug. This paper; therefore, explored how innovation can better improve the delivery of quality meat products to Nigeria consumers. Two hundred and fifty (250) meat consumers in Lagos, Nigeria were randomly chosen from Ikotun area; where an abattoir operates and were required to answer few questions in a carefully designed questionnaire so as obtain relevant information. Chi-Square Tests and Cross tab was used in analyzing the data. The findings shows that χ^2 =49.706, df=9, and p=.000; indicates that innovative steps of the meat handling improves quality of meat provided to the consumers and drastically reduces the problems presently associated with the industry; therefore, it is recommended that, the meat industry must be committed to supplying its customers with products that are safe and quality assured.
Keyword: Red Meat, Innovation, Consumer Legal Protection, Consumer Health.

1. Introduction

Innovation is widely recognized as the engine that drives economic growth. It provides a strong competitive advantage and is one of the best ways to speed up the rate of change and adaptation to the global environment. Innovation is generally considered a key driver to social development and economic growth (Marchese, 2009; Lewis, 2008). To understand the complex nature and management of innovation processes is vital for policy makers, managers, entrepreneurs, advisors, and academics to study and research the topic. According to a recent survey by McKinsey, 84 percent of executives say innovation is extremely or very important to their companies' growth strategy (Anonymous1, n.d.). Globally, meat industry has long used marketing to position their products in the mind of the consumers; by focusing on innovation and how to satisfy consumers in different ways in order to increase their competitive advantage, speed, trade, and build a profitable relationship with the customers. Meat industry is involved in slaughtering, processing, packaging, and distribution of cattle, sheep, and hog; so as to bring in large revenue (Anonymous2, n.d.).
According to Indexmundi.com, the total population of Nigeria was last recorded at 170,123,740 million people in July 2012. Nigeria is not only one of the largest meat producing countries in Africa, but also one of the largest meat consumers in this region of the world (Osho and Asghar, 2005). Animal rearing and production of meat for consumption are important in Nigeria. Among the animals are: cattle, goats, sheep, donkeys and pigs. Poultry is also significant. The meat industry in Nigeria overtime has faced major challenges; ranging from the deplorable conditions of abattoirs, meat handling, distribution, and storage facilities. The overwhelming sanitation problems from abattoirs, distribution systems, and in open markets have posed additional problems to the environment and consumers' health. Examples of such conditions include, but not limited to, improper refuse disposal, inadequate water supply, lack of electricity to power refrigerators, gross inadequacy of sanitary facilities that result in open defecation and urination, overcrowding and the exposure of unrefrigerated meat to flies, rodents, dust, and other contaminants. The identified reasons for these problems are improper planning of markets and abattoirs; the springing up of illegal markets and abattoirs (including private slaughter houses); lack of provision of adequate facilities such as potable water; inadequate road networks, lack of appropriate institutional regulations, enforcement and monitoring; and above all, corrupt and sharp practices by the supervisors of markets and abattoirs (Anonymous, 2008).

Transportation of meat from the abattoirs to final consumers has always been a challenge. In most cases, transporting meat products in passenger's vehicles or motorcycles (popularly called okada) is a common practice in most towns and cities. It is also a common practice to see meat hawked openly on the streets. These practices expose the meat to contaminants such as dust, flies, and other pathogens in the environment. In most abattoirs, ante mortem (pre-slaughter) inspection of animal is rarely done. The abattoir workers usually lack necessary tools and equipment resulting in undue exposure to toxic infections. The proliferation of cooperative slaughter slabs and illegal slaughter houses pose serious dangers to the general public. In these places there are usually no facilities for waste management and water supply. In addition, the slabs are frequently located within dwelling houses where the chances of contaminating domestic underground sources of water supply are high. The cleanliness of abattoirs and slaughter houses present one of the most difficult of all Public Health problems (Mande, 2011). The processes in the abattoir itself generate insanitary conditions; therefore, conscious efforts should be made to maintain an adequate standard of hygiene. Problems associated with these premises and businesses are: (i). Keeping animals in confined space; (ii). Production, storage, and disposal of (offensive) wastes (iii). Ensuring provision and maintenance of adequate sanitary facilities; (such as meat shops, equipped with display glass, (iv). Sanitary transportation of meat products, and (v). Refrigeration of meat from abattoir to consumers (Mande, 2011).

Despite of the fact that there are regulations concerning the up keeping of abattoirs to ensure they operate in an hygienic conditions, it appears that the majority of abattoirs operators, meat handlers, and meat sellers are hardly aware of the legal dimension of their duties in selling and marketing of meat products to the society. In view of this, there are many agencies in Nigeria that regulate the sales of goods for the purpose of protecting the consumer; as there are wide range of regulations in this regard. The key question to address is why these rules and regulations are not enforced.

2. Literature Review

The effect of meat consumption on cardio-metabolic risk has been continuously studied (Oh, Kim, Ahn, Chi, Suh, 2010; McAfee, McSorley, Cuskelly, Moss, Wallace, Bonham, et al., 2010), but their associations are not conclusive, nevertheless, preventable diseases such as stroke, chronic liver disease (CLD), hepatocellular carcinoma (HCC), Type 2 diabetes mellitus, heart diseases, cancer, cardiovascular diseases, cerebral infarction in women, and several different cancers have been implicated and associated with the consumption of red and processed meat (Husseini, Abu-Rmeileh, Mikki, Ramahi, Ghosh, Barghuthi, et al., 2009). Epidemiologic and interventional studies show that lower intake of red meat can reduce these diseases; which have become an important and a growing public health problem (Larsson, Virtamo, & Wolk, 2011; Salas-Salvadó, Martinez-González, Bulló, & Ros, 2011).

Risks associated with red meat consumption:

There is certain health effects associated with the consumption of red and processed meat. Some side effects of consuming red and processed meat are:

- *Cancer:* This is characterized by disproportionate, wild growth of unusual cell, which attack and demolish the other tissues. Cancer varies in the body. Some are life threatening. Cancer begins in genes. Genes contain the commands to make proteins, molecular laborers that serve as building blocks of cell, control chemical reactions, or transport materials to and from the cell. Red and processed meat increases the risk of colorectal cancer (Sinha, Park, Graubard, Leitzmann, Hollenbeck, Schatzkin, 2009). According to World Cancer Research Fund (2009), the evidence shows that eating up to 500g (cooked weight) of red meat per week does not really raise the risk of having cancer.

  Eating more than this, however, certainly increase the risk of getting colorectal cancer and the report further stated that red meat contains haem, an iron-containing compound that provides red meat its color. This compound has being shown to wipe out the lining of the colon-rectal. Red meat also stimulates the manufacture of N-nitroso compound in the stomach, which can injure the DNA in our cells. Cancer develops gradually and may not be visible easily in its early stage. Some people with undiagnosed colorectal cancer may find traces of blood in their feces. They may also be occurrence of consistent constipation or diarrhea, abdominal pain or inexplicable weight loss. In the long run, the tumor may grow so big that it hinders the intestine and causes it to rupture. Screening test can detect colorectal cancer in its early and without difficulty treatable stage (Rohrmann , Overvad , Bueno-de-Mesquita, Jakobsen, Egeberg, Tjønneland, et al., (2013).
- *Cardiovascular Disease*: According to Williamson, Foster, Stanner, & Buttriss, (2005), cardiovascular disease accounts for about eighteen million deaths each year. This disease is modifiable by diet. Red meat is admittedly a provider to bigger risk of heart disease for the reason that it's relatively high role in the intake of fat. Dietary fats are considered as having a significant

influence on cardiovascular disease because of their effect on blood cholesterol level.

- *Type 2 Diabetes:* According to Díaz-Apodaca, Ebrahim, McCormack, de Cosío, & Ruiz-Holguín (2010), type 2 diabetes mellitus is known as a global communal health crisis due to the elevated medical and socioeconomic expenses that result from problem connected with the disease. "Diabetes mellitus, one of the highest increasing constant illnesses in the United States of America refers to a group of metabolic diseases characterized by abnormally high blood glucose levels" (Fortmann, Gallo, Walker, & Philis-Tsimikas, 2010). Symptoms characteristic of Type 2 diabetes include those found in Type 1 diabetes, as well as constant infections or skin sores that repair slowly or not at all, generalized tiredness, and itchy or numbness in the hands or feet. According to Williamson et al., (2005), the prevalence of type 2 diabetes is rising quickly worldwide and this is thought to be associated to the increasing occurrence of obesity.

3. Legal Protection for Meat consumers

In looking at the legal framework for protection for meat consumers, the tort of negligence will be examined. Negligence is a civic wrong which imposes duties at civil law in various ways relevant to modern commercial activities such as the sale of defective meat. Negligence is defined as a breach of legal duty to take care which results in damage undesired by the defendant to the plaintiff (Winifield and Jolowig, 1989).

According to Adams (2003), negligence is considered the commonest tort claim considering the important role it plays in product liability as it enables a person who has suffered harm as a result of defects in product he consumed which defect resulting to the harm he suffered was caused by another's carelessness, to bring an action under this tort, a consumer must be able to establish three essential elements which are; (1) that there was a duty of care owned him by the seller, (2) there was a breach of the duty, and (3) and as a result of that breach, he suffered some damages.

The first element which is a duty of care is said to be owed the consumer if it is established that the seller reasonably foresaw that consuming the defective or contaminated meat could cause harm to the consumer. This can be implied where cows are slaughtered without due regard to the sanitary environment or transported by an unhygienic means; such meat seller can reasonably be said to foresee the harm likely to be caused the consumer of such product. This principle was enunciated by Lord Atkin in the celebrated case *of Donoghue v. Stevenson (1932) AC 562* that a manufacturer owes a duty of care to the ultimate consumer of the product; while a breach duty of care is said to occur where reasonable care or precaution is not taken to prevent the harm that the consumer is likely to suffer.

In addition to establishing the duty of care owed the consumers and breach of that duty, the consumer under this tort must prove that he has suffered some damages as a result of that breach. The above three elements were established in the earlier mentioned case of *Donoghue v. Stevenson* where the court held that a manufacturer of a chattel owed a duty of care to whoever will be the end-user of his product and would be liable under this tort if person suffers harm as a result of any defect in the product; meaning that a meat seller must take reasonable precaution as the consumer may not have the privilege of examining the meat to know whether it is contaminated or not. This same principle in Donoghue's case was equally applied in *Osemobor v. Niger Biscuit Co. Ltd (1973) NCLR, 382*. Here the plaintiff bought a packet of biscuit; only to discover while eating it that it contained a decayed tooth. She instituted an action against the manufacturers. The court declaring the manufacturers liable held that a manufacturer who produced goods for consumption must take reasonable care when producing such goods so that they can be used for the purpose or manner intended without causing harm to the consumer.

In order to monitor commercial activities and to ensure that consumers are protected against product defects, the Nigerian government has put several consumer protection regulatory agencies in place; some of which are the National Agency for Food and Drug Administration and Control (NAFDAC), the Standard Organisation of Nigeria (SON), Consumer Protection Council (CPC). The major responsibility of Standard Organisation of Nigeria is to prepare standards for products and ensuring that such products correspond with the required standard. It follows therefore that the organisation is to see that buyers and consumers alike are protected when they enter into commercial transactions and also help eradicate most uncertainties that parties encounter when buying and selling products/services (Agoma, 2005).

The National Agency for Food and Drug Administration and Control (NAFDAC) has amongst other functions the duty of determining the suitability or otherwise of medicine, drugs, food products, cosmetics, medical devices or chemicals for human and animal use and to carry out such activities as are necessary or expedient for the performance of its functions. These functions are implemented through NAFDAC Product Registration which ensures that any registered product by the agency is certified fit for human consumption.

The third agency is the Consumer Protection Council (CPC). This agency is established by law to protect consumer against defective goods and services. Its statutory functions include providing speedy redress to

consumer complaints, removing or eliminating from the market hazardous products and causing offenders to replace such goods with safer and more appropriate alternatives; organize and undertake campaigns and other forms of activities as will lead to increased public consumer awareness; encourage trade, industry and professional associations to develop and enforce in their various fields quality standards designed to safeguard the interest of the consumer; issue guidelines to manufacturers, importers, dealers and wholesalers in relation to their obligation under the consumer protection council decree; encourage the formation of voluntary consumer groups or associations for consumers' well-being amongst other stated functions.

To successfully carry out the above stated functions, CPC is empowered by law to apply to court in order to stop the circulation of products which are likely to be harmful to the public. And also to make manufacturers complied with all safety standards in manufacturing their products. Added to the above stated functions, CPC has regulatory power to prevent the sale, distribution, advertisement of products that fail to meet required standards. Thus its main purpose is to prevent dangerous goods from reaching the market or if they do, to forthwith their sale.

From the fore going, it appears that CPC has a more direct mandate on the consumer than the other two agencies and if effectively harnessed will redress whatever complaints exist in commercial transactions thereby improving the consumer's power (Kanyip, 2005). In spite of these statutory provisions put in place by the government to regulate consumption of products, the effect of these agencies in regulating the meat market leaves much to be desired.

4. Innovation of meat marketing

Innovation fundamentally involves converting new ideas into action; the scope of innovation is wide ranging, from processes and technologies, developing new products, creating new markets or administration systems such as business models or procedures (Van de Ven, 1986; Markides, 1997; Miller, 2001). Urabe (1988) sees innovation as the creation of a new idea and realization of these new ideas into a new product, process, or service, leading to the active growth of the national economy and the increase of employment as well as to a making of pure profit for the innovative business enterprise. In the organizational context, innovation may be linked to performance and magnification through enhancement in effectiveness, productivity, and quality (Urabe, 1988). The purpose of innovation is optimistic change to make someone or something better. Audretsch and Thurik (2001) confirmed that technological innovations create good opportunities for new entrepreneurs and for commercial applications. Innovation leading to enlarged productivity is the fundamental source of growing wealth in an economy (Rosenberg, 2004). Morris (2009) concluded that innovation refers distinctively to that new thing itself that the innovation procedure has created. To be considered an innovation in business, the effect must be improved value in the form of new or enhanced functionality, a price increase (good for the seller), a price decrease (good for the buyer), and better margin for the seller, reduced cost or some mixture of these (Lin, Li, and Whinston, 2011).

By using innovation, the company strives to satisfy the needs of the consumer while also trying to achieve the organizational goals. An innovative idea at times changes the product positioning in the mind of consumers and move the company from the market follower to a market leader (Chen and Chie, 2007). Consumers buying pattern change when innovation is brought to the picture. The goal of this research is to verify that innovation changes the consumer buying pattern in the meat industry. Within the meat industry, quality assurance is a whole of chain consideration but has specific ramifications within the processing sector as it directly impacts animal health and welfare, food safety, and eating quality (Duffy, and Fearne, 2009).

Nevertheless, all the measures mentioned above are not in place as far as Nigeria meat market is concerned. The question here is how the meat industry can effect innovation and to what extent does it affects the culture, belief, custom, practice of Nigeria consumers. Innovation is not solely dependent on new inventions. As organizations and institutions undergo changes intended to improve existing products and services, innovation as the introduction of change in this sense must bring the essential characteristic of gradual change in the Nigeria red meat market. Innovation is concerned with the smaller modifications or alterations in what already exist. To this end, the following suggestions are offered:

5. Meat Packing

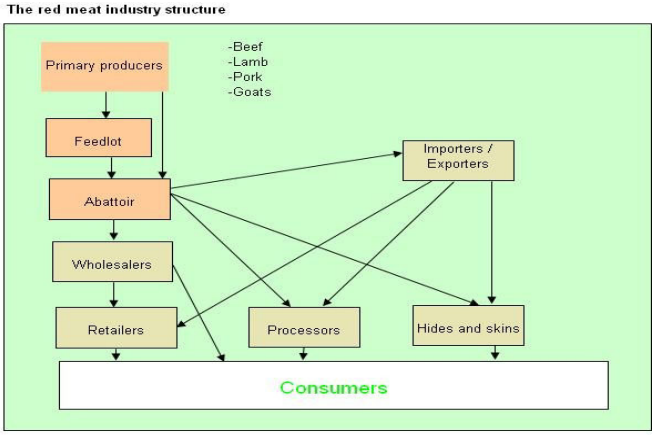
According to Buhr and Ginn (2011) meat packing industry deals with the slaughtering, processing, and supply of animals such as cattle, pigs, sheep, and other livestock animals. The industry is primarily focused on making meat for human consumption. It also yields a diversity of by-product including hides, dried blood, feather, and through the process of rendering, fat such as tallow and protein meals such as meat and bones. The activities that take place in the meat industry are:

5.1 Distribution: "Distribution entails a number of activities centered on a physical flow of goods and information" (Hitt, Ireland, and Hoskisson, 2006 p. 184). The distributor involves the agent,

wholesaler and the retailer (see diagram below). The wholesalers collect and by goods in bulk from the distributor and later sell in smaller quantities to the retailer. The retailer buys in small quantities from the wholesaler and sells in units or bits to the final consumer. Sometimes goods are being sold to the retailer depending on the products to be sold.

Lamb, Joseph, and Hair (2000) identified two different levels of distribution as follows:

- *Intensive distribution*: the distribution is aimed at utmost market coverage. The producer tries to make the goods accessible for each means that the consumers might want to buy from.
- Selective distribution: in this level, dealers are screened. The producer sells its product through certain dealers but not all possible wholesalers and retailers. Exclusive distribution: this is where only authorized dealers are allowed to sell a particular product. The dealership is exclusive and restricted. At times it might be only one dealer in one region. The distribution of meat involves the distribution of slaughtered or processed animals to wholesalers, retailers, and final consumers. The distribution process starts from the abattoir, from there is later distributed to wholesalers or retailers depending on the use of the meat. The process must involve the use of refrigerated vehicles to facilitate the distribution (Lamb et al., 2000).



Source: F:\Red Meat\Meat Processing and Distribution.htm

Processing: this typically describes the act of taking something through an established and usually routine set of procedures to convert it from one to another, as a manufacturing or administrative procedure, such as processing milk to cheese, or converting meat to corn beef.

6. Innovation Strategies

Oparanma, Hamilton, and Jaja (2009) defines strategy as "guidelines and plans developed by a business organization to ensure survival in turbulent environment". They further believed that strategy consist of a determined arrangement to direct the operation of resources in an attempt to generate growth. Kotler and O'Donnell, (1988), defines strategy as a set of objectives, policies, and regulations that direct over-time the firm's marketing efforts, its level and distribution partly separately and partly in reaction to changing environmental circumstances. In the business world, the environments of doing business can create a great change for the organization as far as innovation is concern. An organizational environment can therefore, be defined as "a set of conditions and forces which surround and have direct influence on the organization" (Aham and Onuoha, 1999). Innovation strategy is an essential tool for product development and continued growth even in difficult times (Robert and Edgett, 2010).

A comprehensive product innovation strategy must therefore include, among other elements, clearly defined objectives and defined strategic areas of focus; it must have a widely understood role in broader business goal. Strategy begins with the goals for the business's product innovation effort and a clear understanding of how these product innovation goals tie into the broader business goals. Business innovation strategy should stipulate the goals and objectives of the business's entire innovation effort and indicate what role that innovation will play in helping the business achieve its objectives; therefore, innovation strategies of a corporation should not only be concentrated on only one phase of the business. If a company is innovating, this idea should be targeted to all the division of the organization (Aham and Onuoha, 1999).

6.1 Effect of Innovation on the Organization

Innovativeness has being a very important part of the modern organization. It has sustained a lot of companies and even made them more competitive. The following among are other effects the effects of innovation in an organization. According to Bowonder, et al., (2010), innovative companies have risen in the market and have

surpassed their competitors just by bringing new ideas to the market. Some companies have risen from being last in the market to being the market leader. Through co-creation, problems of the consumers are being anticipated and solved by the organizations that innovate well. These companies make research and develop new product at a favorable way which consumers can afford. According to Morris (2009), innovation has increased competition in the market. Industries have become more competitive. Companies have produced and imitated different products. This is due to the innovativeness of the companies. For this reason, consumers have a wide range of products to choose from.

Due to innovation, consumer satisfaction has increased. Innovation in some industries have kept the consumers satisfied because of the development of new product, service, ideas and others in which their daily wants can be satisfied (Dooley & Sullivan, 2003). Innovation has given managers the foresight ability to look into the future. Managers have being able to focus on what is ahead, what to bring into the market next for them to be at the top or to be able to survive, channels through which these ideas will work. Since managers do not want to lose their customers, more money is being spent on research to know what the consumers desire. One of the most important things innovation has done is that more jobs have being created for the unemployed (Hemais, Barros, & Rosa, 2005). Some innovation breeds new companies, new supervisors, new researcher and other things. An idea always has other things that will accompany it, this also means more personnel to overlook and supervise it.

7. Methodology

The major research instrument used in this work was questionnaires because of the nature of the study. The questionnaire was effectively designed to obtain information relevant for providing answers to research questions and hypotheses tested. The questionnaire was divided into sections. Section A contains information about respondent like their gender, marital status, years of experience and educational status. The section B consists of twenty five questions; mainly to collect information from the respondents about their purchase habits, where they buy their meat products, what condition are the products before purchase, how they feel after the purchase. Additional information was requested from the respondents if they are willing to see new innovative ways in the way the meat products are delivered to them. The questionnaire was distributed to meat consumers in Lagos state. The questionnaire was in Likert-scale form. Its purpose was to rate the participants response using a scale of 1(strongly disagree) – 10 (strongly agree).

Two hundred and fifty (250) meat consumers in Ikotun area of Lagos State, Nigeria, were randomly chosen and were required to answer few questions in a carefully designed questionnaire so as obtain relevant information. The Ikotun area was selected because two abattoirs operate in this area and potential customers can also purchase their meat at these abattoirs. The 250 respondents were selected because of inadequate funds and time constraints. Questionnaire was administered by trained marketing students of Covenant University; who are familiar with the Ikotun area. Criteria for administering the questionnaire are as follows: (i). respondent must be an adult – (age: 18-65), must be able to read and fill the questionnaire without any assistance from a third party, (iii). Must have purchased meat within two weeks prior to filling the survey, and (iv). Respondent must be a decision maker within the household. The responses were categorized, with the highest score indicating enhanced self-efficacy. The self-efficacy scale was internally consistent (standardized alpha coefficient) in our sample, Cronbach $\alpha = 0.76$.

7.1 Research Hypotheses:

The following hypotheses were developed and tested:

H_1: Sanitary problems do not affect the meat industry.

H_2: Consumer does not perceive innovation in relation to quality assurance.

H_3: Transportation and storage of meat product does not affect quality of meat.

H_4: There is no relationship between innovation and the reliability of the service provided in meat industry

8. Analysis

Out of the 250 questionnaire, only 216 were usable. Seven were not returned, and the remaining 27 were incompletely filled. A total of 46 (21.3%) of the respondents are male and 170 (78.7%) are female. Twelve (5.6%) of the respondents are below 20 years of age, seventy nine (36.6%) of the respondents are between the age of 21-30 years, ninety eight (45.4%) of the respondents are between 31-40 years of age, and twenty seven (12.5%) of the remaining respondents are 41 and above. This signifies that majority of the respondents fall between the ages of 31-40 years.

Each of the hypotheses was tested separately and the results are as follows:

8.1 H_1: Sanitary problems do not affect the meat industry.

The ANOVA shows the assessment of the statistical significance of the result. From the result, the first predictor (The environment the meat is slaughtered in is dirty) has the F- value of 161.350, $p = 0.000$. From the above

result, the second predictors (The environment the meat is slaughtered in is dirty; the location of the meat shop is not conducive for sale of meat) has the F- value of 89.997 and p = 0.000. The third predictors (the environment the meat is slaughtered in is dirty, the location of the meat shop is not conducive for sale of meat, and the equipments used in the meat market are unclean) has the F= 62.363, p = 0.000. Decision: based on this analysis demonstrates that all calculated values are above the critical values, the null hypothesis (H_0) is rejected while the alternative hypothesis (H_a) is accepted; which states that: sanitary problems affect the meat industry.

8.2 H_2: Consumer does not perceive innovation in relation to quality assurance.

Chi-Square Tests was carried out to test Hypothesis which was to determine if Consumers perceive that innovation of new ideas in selling and handling of meat products will lead to quality assurance. To test *this* hypothesis, certain questions relating to innovation and quality assurance were used in analyzing the data. Cross tab was also used in analyzing the data. Outcome of the test indicates that χ^2 =76.586, df=16, p = .000. It also shows that preservation of meat will do better with refrigerator and will also increase the meat shop quality, package, and service to consumer's patronage. This also means that consumers see refrigeration of meat as a way to prevent the meat from being contaminated. This shows a positive relationship between innovation and quality assurance.

8.3 H_3: Transportation and storage of meat product does not affect quality of meat.

Hypothesis 3 was to test if transportation and storage of meat product affect quality of meat (Consumption rate). The table below shows the output of the analysis of the test. ANOVA was carried out for the test to show if transportation and storage of meat product affect quality of meat and the consumption rate. The output of the analysis is as follows: R^2 =.547, F=258.012, df(2)=214, p=.000. The model shows that the first predictor (the meat bought from street hawkers is mostly contaminated.), while customer's physical contact with the meat increases chance of the meat being contaminated.

8.4 H_4: There is no relationship between innovation and the reliability of the service provided in meat industry

Chi-Square Tests and Cross tab was used in analyzing the data. With χ^2 =49.706, df=9, and p=.000; indicates that price tag placed on the package of the meat reduces the problem with the issue of price bargaining and consumers will patronize the meat shop because of its quality service. This also means that consumers perceive price-tag placed on a package as quality service. This shows a positive relationship between innovation and the reliability of the service provider in the meat industry.

Table 1:
Summary of Hypotheses testing:

		Change Statistics			
	Hypotheses	R^2	F Change	df2	Sig.
H_1:	Sanitary problems do not affect meat industry	.430	161.350	214	.000
H_2:	Consumers does not perceive innovation in relation to quality assurance	.458	11.059	213	.001
H_3:	Transportation and storage of meat does not affect its quality	.547	258.012	214	.000
H_4:	There is no relationship between innovation and the reliability of the service provided by meat industry	.573	13.149	213	.000

Source: Data Analysis Result.

9. Discussion

Theoretical findings reveal that service innovation are very essential in the sense that they bring positive impact to enhancing the competitiveness of a firm, improving service delivered and reducing cost (Dooley & Sullivan, 2003). Service innovation is a strong force driving the competitive environment. Companies today enjoy their competitive advantage and economic benefits by adopting service innovation which plays a big part for industry success. In the addition to this, the following were also revealed in the theoretical findings.

- In the course of carrying out this research, it was found out that most consumers do not like the issue of poor sanitation. Poor sanitation has been identified with sicknesses and diseases. Poor sanitation in the red meat industry can lead to outbreak of infectious diseases (like the evolution of the influenza A (H1N1) outbreak in China in early 2000, caused by chicken). Information collected from the respondents indicate that consumers will prefer a better sanitized environment and also the consumers feel the meat industry can do more by being innovative in the ways abattoirs and meat sellers handle meat products before getting to the final consumers.
- It was also found that consumers are willing to pay for quality products. If the meat industry would involve itself in advanced practices like packaging, labeling, adding price-tags to the meat package, all these will increase not only the price of the products, but also the customer's patronage. Quality in the

mind of consumers is associated with higher price tags.

- The income or salary the consumers received strongly affect their consumption of meat. Through this study, it was found that the one of the classic 4ps of marketing (which is place), plays a very important role in profitability of meat because consumers are willing to buy more not only if it is easily accessible, but in a neat and conducive environment.
- Consumers will prefer adoption of meat vans in distributing the meat they eat instead of meat being carried on the streets by hawkers who increase the chance of the meat being contaminated before consumption.
- Finally, it was also discovered that innovation will increase the quality of meat products consumers will purchase and that will make the red meat industry competitive and over time, a profitable venture.

10. Recommendation and Conclusion

Having reviewed different literature and data on service innovation in the meat industry and its effects on consumer Behavior in Lagos State, the following suggestions are made for the company to achieve their set objectives; it is recommended that the meat industry should adopt service innovation in their organization in order to enhance and provide quality service thereby creating demand and new market. Service innovation is itself service. This suggest that service can be in any form in the meat industry, be it storage, transportation, sanitary, methods, process and it should be adopted in order to provide quality service.

The various consumers' protection agencies should be alive to their responsibilities in ensuring quality delivery of the product.

Factors that affect meat industry from engaging in innovative activities should be recognized and acknowledge. This will help the meat industry to know where to put its resources in order to get more customers and thereby improving quality. Investment should be made on the right innovative idea that will improve and enhance quality, on-time, reliable and effective service in the meat industry.

Organizations doing business in the meat industry should also endeavor to adopt innovative process in order to fit in the industry and business at large and make the meat industry as competitive as it should be. The researcher also recommends that more research should be carried out in another innovative aspect like "Why can't E-commerce be introduced to the business of meat in Nigeria," This aspect of E-commerce will generally revolutionalized the trading system in the meat industry.

It is therefore recommended that the relevant consumer protection regulatory agencies should inspect the abattoirs before, during and after operations for good sanitary conditions. The abattoir workers should be equipped with necessary tools and equipments so as to facilitate safety and prevention of exposure to cross contaminations and infections. The government should close all unlicensed slaughter slabs and illegal slaughter houses which pose serious dangers to the general health of the public. It is further recommended that the meat industry should be committed to supplying its customers with products that are safe and quality assured; as consumers will be confident that extensive testing and verification processes are in place. The use of innovative ideas in the meat industry must be accepted by the consumers or else the meat industry will not be as profitable as it used to be.

The study has contributed to our knowledge in series of factors associated with service innovation and service quality in the meat industry. The meat industry in Nigeria has not tried its possible best to live up to international standards. The results demonstrate that service innovation will improve service quality and service quality in the meat industry will improve the lifestyle of the consumers most especially, health wise. There have being a positive impact between service innovation and consumer behavior due to the effectiveness of the service provider.

REFERENCES

Adams, A. (2003) *Law for Business Students*; Lagos: Pearson Education Limited.

Agomo, K. (2005) Liability for defective product. *Consumer Journal* 1(1):69-75.

Anonymous1.(n.d.). Innovaton; Retrieved on May 15, 2012, from;
http://www.mckinsey.com/client_service/strategy/expertise/innovation.

Anonymous2.(n.d.). Meat Processing; Retrieved on March 3, 2012, from http://www.holchem.co.uk/meat-processing.aspx.

Anonymous (2008). Policy Guidelines On Market And Abattoir Sanitation; Retrieved on March 8, 2012, from: http://www.nigerianobservernews.com/17122008/features/features7.html .

Aham, A. & Onuoha, B. (1999). *Introduction to business administration.* Owerri, Nigeria: Advance Global Publications.

Audretsch, D. B. &Thurik, R. (2001). "Linking entrepreneurship to growth", OECD Growth Project.

Bowonder, B., Dambal, A., Kumar, S., & Shirodkar, A. (2010). Innovation strategies for creating competitive

advantage. *Industrial Research Institute, Inc*.
Buhr, B. L., & Ginn, B. (2011). U.S. Meatpacking: dynamic forces of change in a mature industry, Choices-Agricultural and Applied Economics Association, 1st Quarter (26,1); p. 1-7.
Chen, S. & Chie, B. (2007). Modularity, Product Innovation, and Consumer
Satisfaction: An Agent-Based Approach; H. Yin et al. (Eds.): *IDEAL 2007, LNCS 4881*, pp. 1053–1062, Retrieved on February 10, 2013, from: http://andromeda.rutgers.edu/~jmbarr/EEA2009/chen1.pdf
Dooley, L. &Sullivan, D.O. (2003). Developing a software infrastructure to support systematic innovation through effective management, *Technovation, Vol. 23*, p. 689-704.
Duffy, R. & Fearne, A. (2009). Value perceptions of farm assurance in the red meat supply chain; *British Food Journal (Vol. 111, No. 7)*, pp. 669-685.
Esuruoso, G. O. (1973). 'The Epizootiology, prevalence and economic aspects of bovine trypanosomiasis in Nigeria'. Paper presented at the 77th U.S. Animal Health Association Meeting, St. Louis.
Ferguson, W. (1966). 'Grazing behaviour of dwarf cattle in Nigeria with some husbandry implications'. In *Proceedings of the First Symposium of the Society for Veterinary Ethology*. pp. 1-2.
Hemais, C. A., Barros, H. M., & Rosa, E. O. R. (2005). Technology Competitiveness in Emerging Markets: The Case of the Brazilian Polymer Industry; *Journal of Technology Transfer, 30: p.303–314.*
Hitt, M., Ireland, R., & Hoskisson, R. (1996). *Strategic Management: Competitiveness and Globalization*. 2nd ed.
Husseini, A.,Abu-Rmeileh, N. M. E., Mikki, N., Ramahi, T. M., Ghosh, H. A. Barghuthi, N. et al., (2009). Cardiovascular diseases, diabetes mellitus, and cancer in the occupied Palestinian territory; *Lancet*; 373, p.1041–49.
Indexmundi.com (2012). Nigeria Population, Retrieved on April 15, 2013, from: http://www.indexmundi.com/nigeria/population.html.
Kanyip, B. B. (2005). Service liability under Nigerian Consumer Law. *Consumer Journal,* 1(1): 90-95
Kotler, H. & O'Donnell, C. (1988). *Principles of management*. U.S.A: McGraw-Hill.
Lamb, C., Joseph, F. & Hair, C. (2000). *Marketing* 5th Edition. New York: McGraw-Hill
Larsson, S. C., Virtamo, J., & Wolk, A. (2011). Red meat consumption and risk of stroke in Swedish men, *The American Journal of Clinical Nutrition; June 8.* Retrived on July 13, 2011 from *http://www.ncbi.nlm.nih.gov/pubmed/21653800#*
Lewis, G. (2008). "Innovation and Productivity: Using Bright Ideas to Work Smarter." New Zealand Treasury Productivity Paper 08/05. Wellington, New Zealand.
Lin, M., Li, S., & Whinston, A. B. (2011). Innovation and Price Competition in a
Two-Sided Market; *Journal of Management Information Systems (Vol. 28, No. 2),* pp. 171–202.
Mande, B. (2011). Policy Guidelines on Market and Abattoir Sanitation; Retrieved on May 15, 2012, from; http://tsaftarmuhalli.blogspot.com/2011/07/policy-guidelines-on-market-and.html.
Marchese, M. (2009). "Issues Paper." International Conference on SMEs, Entrepreneurship and Innovation, Villa Manin of Passariano (Udine), OECD LEED Programme.
Markides, C. (1997). "Strategic Innovation." *Sloan Management Review* 38: 9-23.
McAfee, A. J., McSorley, E. M., Cuskelly, G. J., Moss, B. W., Wallace, J. M., Bonham, M. P., et al. (2010). Red meat consumption: an overview of the risks and benefits; *Meat Science (84,1):* p.1–13.
Miller, W. L. (2001). "Innovation for Business Growth." *Research Technology Management 44(5):* 26-41.
Morris, L. (2009). Business model innovation the strategy of business breakthroughs. *International Journal of Innovation Science, 1 (4):* 191-204
Oh, S. M., Kim, H. C., Ahn, S. V., Chi, H. J., & Suh, I. (2010). Association between meat consumption and carotid intima-media thickness in Korean adults with metabolic syndrome; *Journal of Preventive Medicine and Public Health.; 43(6):* 486-95.
Olutogun, O. (1976). Reproductive performance and growth of N'Dama and Keteku cattle under ranching conditions in the Guinea savannah of Nigeria'. Ph.D. thesis, Department of Animal Science, University of Ibadan: 292.
Oparanma, A., Hamilton, D., & Jaja, S. (2009). Strategies for Managing Hospitality in a Turbulent Environment: Nigerian Experience. *International Journal of Management and Innovation, 1(1):* 43-46.
Osho, G. S. & Asghar, N. (2005). Elasticity (Economics) (Evaluation) Meat (Supply and demand). *Journal of International Business Research, 4(1).*
Robert, C. & Edgett, S. (2010). Developing a product innovation and Technology strategy for your business. *Journal of Industrial Research, 1 (2):* 33-35
Rohrmann, S., Overvad, K., Bueno-de-Mesquita, H. B., Jakobsen, M. U., Egeberg, R., Tjønneland, A., et al., (2013). Meat consumption and mortality - results from the European Prospective Investigation into Cancer and Nutrition. *BMC Med.*;*11*: 63.

Rosenberg, N. (2004). Innovation and Economic Growth: Organisation for Economic Co-operation and Development (OECD), Retrieved on January 14, 2013, from: http://www.oecd.org/cfe/tourism/34267902.pdf
Salas-Salvadó, J., Martinez-González, M. A., Bulló, M., & Ros, E. (2011). The role of diet in the prevention of type 2 diabetes. *Nutr Metab Cardiovasc Dis*. Retrived on July 13, 2011 from *http://www.ncbi.nlm.nih.gov/pubmed/21653800#*
Sinha, R. Park, Y., Graubard, B. I., Leitzmann, M. F., Hollenbeck, A., & Schatzkin, A. (2009). Meat and Meat-related Compounds and Risk of Prostate Cancer in a Large Prospective Cohort Study in the United States; *American Journal of Epidemiology, 170* (9): 1165–1177.
Urabe, K. (1988). Innovation and the Japanese Management System, *Journal of Innovation and Management*: International Comparisons, de Gruyter, New York, pp. 3-25.
Williamson, C., Foster, R., Stanner, S., & Buttriss, J. (2005). Red meat in the diet. *British Nutrition Foundation Nutrition Bulletin*: 323 – 355
Winifield, T., & Jolowiz, S. (1989). *On tort*; Sweet & Maxwell, London.
World Cancer Research Fund. (1997). Food, nutrition and the prevention of cancer: a global perspective. Washington, DC: American Institute for Cancer Research
Van de Ven, A.H. (1986). "Central Problems in the Management of Innovation." *Management Science 32(5):* 590-607.

Appendix1.

Table 2: World Beef and Veal Production and Consumption - 1996 to 2015

	PRODUCTION		Growth (%)[b]		CONSUMPTION		Growth (%)[b]	
	2003-05 Average	2015	1996-05[a]	2006-15	2003-05 Average	2015	1996-05[a]	2006-15
WORLD	62,961	77,835	1.5	1.9	62,230	76,809	1.4	1.9
DEVELOPED	29,460	31,104	-0.5	0.3	29,864	31,737	0.5	0.5
NORTH AMERICA	12,689	14,854	-0.1	1.1	13,578	14,539	0.7	0.5
Canada	1,521	1,967	0.8	0.7	1,025	1,096	0.4	0.7
United States	11,168	12,888	-0.2	1.1	12,553	13,443	0.8	0.5
WESTERN EUROPE	8,257	7,826	-1.0	-0.7	8,408	8,374	0.5	-0.1
EU(25)	8,015	7,623	-1.0	-0.7	8,172	8,152	0.5	-0.1
Norway	83	73	-1.0	-1.3	87	81	-0.3	-1.0
Switzerland	135	125	-1.0	-0.9	145	137	-1.6	-0.9
Other Western Europe	4	5	*2.4*	*3.6*	4	4	1.7	1.6
EASTERN EUROPE	500	532	-1.1	0.8	604	732	0.3	1.2
Other Eastern Europe	500	532	*-1.1*	*0.8*	604	732	0.3	1.2
COM. of IND. STATES	3,925	4,017	-2.6	1.0	4,529	4,790	-2.3	1.4
Russian Federation	1,898	2,018	-3.3	2.1	2,591	2,770	-2.4	2.3
Ukraine	651	513	-5.3	-1.1	562	520	-4.2	-0.2
Other CIS	1,375	1,485	*-0.2*	*0.5*	1,376	1,500	-1.4	0.3
OCEANIA DEVELOPED	2,997	2,771	1.7	-1.4	848	892	-0.4	0.5
Australia	2,322	2,105	2.0	-1.7	744	780	0.2	0.8
New Zealand	675	666	0.7	-0.6	104	112	-3.7	1.5
OTHER DEVELOPED	1,111	1,104	1.4	0.1	1,897	2,410	-1.0	2.1
Japan	504	547	-1.0	0.1	1,213	1,673	-2.8	2.8
South Africa	607	587	3.7	0.1	684	737	3.0	0.6
DEVELOPING	33,502	46,731	3.0	3.0	32,366	45,072	2.4	3.0
AFRICA	3,835	4,996	2.1	2.4	4,216	5,654	2.7	2.5
NORTH AFRICA	861	1,120	1.9	2.3	1,132	1,489	2.5	2.2
Algeria	124	192	2.8	3.7	217	307	7.5	2.9
Egypt	520	688	0.9	2.4	676	909	0.9	2.5
Other North Africa	217	240	*4.2*	*0.9*	239	273	2.6	0.7
SUB-SAHARAN AFRICA	2,974	3,875	2.2	2.5	3,083	4,164	2.9	2.6
Ghana	15	14	-0.6	-0.1	28	39	1.5	3.0
Mozambique	38	40	0.6	0.1	40	42	0.5	-0.1
Nigeria	255	286	-0.6	1.9	285	349	-0.3	1.9
Tanzania	248	315	3.4	2.1	248	331	3.4	2.5
Zambia	41	48	0.0	1.1	41	49	0.0	1.3
Other Sub-Saharan Africa	2,397	3,173	*2.5*	*2.6*	2,442	3,353	3.4	2.7

Source: OECD-FAO Agriculture Outlook 2006-2015-
http://siteresources.worldbank.org/INTAFRICA/Resources/257994-1215457178567/Cattle_and_beef_profi

Dr. Oluwole Iyiola
Dr. Oluwole Iyiola, received his DBA (Marketing) from Argosy University, Sarasota, FL., MBA (Marketing Research) from Golden Gate University, San Francisco, CA., and B. A. (Business Administration) International Marketing from Eastern Washington University, Cheney, WA. Currently; he is a Lecturer at School of Business Management, Covenant University, Ota, Nigeria. He was a Visiting Professor of Marketing at The Institute of

International Studies - IIS Ramkhamhaeng University, Bangkok, Thailand, from January to August 2009. Dr. Iyiola has wide experience in teaching, marketing and management, consulting, and administration. He served in senior positions in government and private sector. He has attended and presented papers in several national and international conferences. He is also the Director of Global Marketing & Research at the O2 International Consulting Firm, based in Dallas/Houston, TX. USA. Some of his publications have appeared in Journal of Business Diversity, Journal of Marketing Development and Competitiveness, Anvesha- The Journal of Management, and Scientific Annals of the "Alexandru Ioan Cuza".

EDITH EBEGUKI ONI-OJO

Edith Ebeguki Oni-Ojo obtained LL.M in Law from University of Benin; she had earlier obtained a B.L from the Nigerian Law School (Abuja) and an L.LB from University of Benin. Presently she is undergoing her PhD programme in Industrial Relations and Human Resource Management. She has held workshops on Alternative Dispute Resolution as a facilitator. Her research interest include; Alternative Dispute Resolution, Industrial Relations & Human Resource Management and Business Law.

She lectures at Covenant University. She is a member of the Nigerian Bar Association. She has published in Australian Journal of Business and Management Research.